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CCMI



# This Month in Telecommunications

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Volume 1

Month

JULY 1976

## This Month...

### UNRESTRICTED SHARING AND RESALE ORDERED BY FCC

*July 1, 1976 -- Washington, D.C.: The Federal Communications Commission has ordered all interstate communication common carriers and international record carriers to remove from their tariffs any and all restrictions on the resale and sharing of private line services no later than September 1, 1976. Action is seen as a catalyst to the development of facilities management business, hybrid data processing applications, and resulting in savings to numerous private line users.*

The FCC's directive to remove all restrictions on resale and sharing appears destined to reshape the entire nature and character of the communications purveyor to the business community. In one fell swoop, it appears that the FCC has (a) opened up a whole new area of business-communication facilities management, (b) provided the Specialized Common Carriers with "instant" national networks (without capital investment), (c) destroyed Telpak as we now know

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### FCC TAKES ACTION WHICH MAY UPSET DDS MARKET

*July 2, 1976 -- Washington, D.C.: An FCC trial judge order requiring the restructuring of DDS rates, which have been ruled "predatory" and "noncompetitive," compounded by a separate FCC move to ban resale restrictions may mean a major shift in DDS's place as a telecommunications offering. Additionally, temporary rates mandated by the trial judges will mean a sharp increase in rates for low-speed DDS users.*

AT&T's Dataphone Digital Service (DDS) tariff has been ruled discriminatory by Administrative Law Judges who have accused AT&T Long Lines of "open, notorious discrimination." This initial decision will automatically become effective in fifty days unless there is an appeal by one of the affected parties or the full Commission orders review of its own motion. The initial ruling necessitates a restructuring of the DDS schedule of rates, which had been conditionally granted in December 1974. The primary objection of the two Judges was that when AT&T developed the existing rates they had calculated that a large majority of users (79%) would initially subscribe to the low-speed, 2.4 kbps service. Based on this consideration, AT&T tariffed 2.4 kbps service at a rate

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*EXECUNET RULED ILLEGAL in the June 30 FCC decision reaffirming its argument of July, 1975 that EXECUNET cannot be considered a "private line" service.*

(Story on Page 6)

*WU'S SERIES 1000 RATE RESTRUCTURING goes into effect on schedule.*

Breaking with tradition, Western Union has tariffed their service differently from AT&T Long Lines--less expensive in some instances.

(Story on Page 3)

*DATASPEED 40, AT&T's "INTELLIGENT" DATA TERMINAL, now tariffed in most areas. FCC-denied, synchronous version is also available for private line application in many states.* (Story on Page 3)

*SPCC PLANS TO OFFER SPRINT on August 12. The first of its kind as a private line switched service for occasional-use and foreign exchange services--may be less expensive than WATS.* (Story on Page 2)

*THIS MONTH'S FORUM takes a subjective look at misunderstood definitions in data communications. CONSENSUS SURVEY BALLOT attached. Readers asked to participate.* (Story on Back Page)

AT THE STATE LEVEL -- Page 2

IN BRIEF -- Page 6



# At the State Level . . .

## RATE APPLICATIONS:

Georgia (Southern Bell) -- \$103 million. Idaho (Mountain Bell) -- \$ .3 million. Illinois (Illinois Bell) -- \$110 million. Michigan (Michigan Bell) -- \$178 million (representing an increase of over 19%); May grant of \$52.2 is being appealed in the courts in order to gain an additional \$35.8 of the original request. Oklahoma (Southwestern Bell) -- an additional \$5.5 million has been requested; January application for \$12.8 million is still pending. South Carolina (Southern Bell) -- \$34.2 million.

## DECISIONS:

Kentucky (South Central Bell) -- granted \$15 million of \$33.3 million increase (which Telco has been collecting since December), a refund of the difference has been ordered. Louisiana (South Central Bell) -- \$73 million request denied. Minnesota (Northwestern Bell) a District Court has ordered the refund of the \$38.7 million increase which the Telco has been collecting since late 1974 (the court order is being appealed). Ohio (Ohio Bell) -- receives \$200 million of \$216 request for July 9 effective date.

## Looking Ahead:

## SPCC INTRODUCES SPRINT SERVICE

Beginning on August 12, 1976, Southern Pacific Communications (SPCC) plans to offer SPRINT service to the metropolitan areas of Anaheim, Boston, Los Angeles, New York City, Philadelphia, and San Diego. In filing for SPRINT service, SPCC will be following ITT Corporate Communications (ITTCCS) by introducing a private line switched service aimed at the needs of the occasional-use, voice-grade market. Barring rejection or any other form of intervention on the part of the FCC, SPRINT will be the first service of its kind actually in operation.

The economic attractiveness of SPRINT can be summed up in the following approximate comparison of transmission charges (rates shown do not reflect access line charges):

<u>SERVICE</u>	<u>MONTHLY MINIMUM</u>	<u>2 MIN. CALL BETWEEN NEW YORK &amp; LOS ANGELES</u>	<u>7 MIN. CALL BETWEEN NEW YORK &amp; LOS ANGELES</u>
MTS (AT&T)	NONE	\$ .92	\$2.82
MEASURED WATS (AT&T)	\$245.00	.61-.82	2.14-2.86
SPACETEL (WESTERN UNION)	350.00	.40-.77	1.40-2.72
SPRINT (SPCC)	100.00	.52	1.81

Not only is SPRINT less expensive than WATS and, in many cases, SPACETEL; it requires a much lower minimum monthly usage. Furthermore, there is no stated minimum call length as in MTS or minimum average call length as in SPACETEL. However, it should be remembered that SPRINT does not parallel the features of these other services. For example, unlike WATS, SPRINT users will only be able to contact a limited calling sphere. Still, low-volume user's not requiring a large calling area will find SPRINT preferable to such metered private line options as SPACETEL, which becomes less expensive as usage nears a volume of 900 minutes per month.

The greatest innovation and, therefore, the best marketing feature of SPRINT is that it can be arranged to allow the customer to employ off-network access lines (ONAL's) in order to open one end of the channel to the public network. In this way the service can be made to resemble a foreign exchange service (FX). With the FCC's rejection of Execunet (See story on page 3), SPRINT becomes the only available private metered use FX service until ITTCCS introduces Switched Private Network Service (SPNS) in 1978. Transmission at the open end is limited to the extended area of the terminal city. Rates outside the inner metropolitan area will be charged at approximately 9% over the applicable accumulated message unit charge.



# DATASPEED\*40

DATASPEED\*40 is a relatively low-cost data terminal featuring full text editing, automatic format control, format protection, local mode operation, 24 x 8 CRT display, with optional line-at-a-time impact printer. A station may be either a Keyboard/CRT Display console, a Printer or a combination of both.

Asynchronous DATASPEED\*40: Keyboard/CRT/Printer data terminals which offer a wide range of individual station configuration, depending upon user requirements. Stations are designed to operate asynchronously at 1050 or 1200bps (10-bit transmission code) in a private line, selective calling environment under control of the customer's computer, or for application on the public switched telephone network. It is also offered at 300 or 1200bps for use in systems which are designed to support teletypewriters. The asynchronous DATASPEED\*40 is available in most states.

Synchronous DATASPEED\*40: Incorporates the same editing and formatting features of the asynchronous version. Transmission is synchronous at speeds of 2400bps or 4800bps for polled multi-station private line systems. This configuration is available in most major states. (See "The Forum", back page, for state listing.) For application of up to three stations (per outlying location), a mini-cluster controller is required for format editing and line protocol. For applications of four or more stations, editing and line control are provided through the "Station Cluster Controller" in conjunction with "Device Controllers." A Cluster Controller can drive up to four Device Controllers, with each Device Controller accommodating up to six Stations (a capacity of 24 stations per Cluster Controller).

### REPRESENTATIVE TARIFF -- MONTHLY RENTAL BASIS

### Asynchronous (1,200bps) Station Equipment

Keyboard/CRT Display . . . . .	\$105.00
--with line printer. . . . .	160.00
--1,920 additional char. storage .	6.00
--3,840 additional char. storage .	12.00
Line Printer Only. . . . .	95.00
--with 1000 Character Storage. . .	101.00
Editing Features Package	
--1,900 character storage. . . . .	12.00
--3,840 character storage. . . . .	13.50
--5,760 character storage. . . . .	15.00

### Synchronous (2.4/4.8kbps) Station Equipment

Keyboard/CRT Display . . . . .	\$ 75.50
Line Printer . . . . .	90.50
Mini-Cluster Controller. . . . .	40.00
Station Cluster Controller	
--Basic Unit . . . . .	38.00
--Device Controller, ea. 6 Stations	39.00

\* Registered Trademark of AT&T

## WU TTY RATES TAKE EFFECT

Western Union's new Series 1000 (teletypewriter) rates took effect on schedule at the end of June. Although the new rates represent an increase as well as a restructuring, WU claims that their new rates are "significantly below new rates for comparable services from the Bell System." Traditionally, WU's rates have paralleled those of AT&T Long Lines, matching or nearly matching each rate increase. WU's new rates, however, break away from the conventional Long Lines format by charging different IXC rates for 2-point and multipoint services. Long Lines, for example, will remain more attractive to most multipoint users. However, WU's new structure includes considerably lower rates for service terminals than those of AT&T. This may prove worthwhile to users with enough terminal points to offset the higher multipoint IXC charges. 2-point IXC rates for types 1002, 1005, and 1006 are less expensive under the new WU schedule than under AT&T's March rate increase.

# Countdown

● = TARIFF FILED

► = TARGET EFFECTIVE DATE

■ = FCC DECISION SCHEDULED

1977

[illegible]



## TELPAK RATES TO INCREASE UNDER SHARED USE

(CONTINUED FROM PAGE 1)

it, and (d) lowered private line rates for many users.

To better understand the scope of the ruling, the following FCC definitions are offered:

**Shared Use** -- "a nonprofit arrangement in which several users collectively employ communications services and facilities provided by a carrier, with each user paying his proportional share of the related communications costs."

**Resale** -- "the subscription to communications services and facilities by one entity for the purpose of reoffering those communications services and facilities for profit."

**USER SHARING:** Since 1971, users have been permitted to share many private line service offerings--Series 1000 (Teletypewriter), Series 2000 (Voice), and Series 3000 (Data). While some sharing of these private line services has taken place, the economic advantages have not been great enough to have stimulated large scale application of this provision. Another factor deterring enthusiasm for "shared use", has been the carrier-imposed restriction that one of the sharing partners must assume the responsibility of allocating proportional charges and assume financial liability for the payment of the other sharing partners. Under the FCC's new order, this restriction is to be removed, thereby clearing a major roadblock for sharing among small users.

**TELPAK--THE HEART OF THE FCC'S ORDER:** At least on the surface, unlimited sharing of Telpak represents a highly leveraged area for the pooling of private line facilities requirements. Consider the possible difference in interexchange channel (IXC) mileage charges--

Series 2000:Hi-D Route . . . . .	\$ .92
Lo-D Route . . . . .	2.71
Series 8000*, One Voice Channel	
First 250 Miles . . . . .	1.35
Next 250 Miles . . . . .	.95
Each Additional Mile . . . . .	.68
Series 5000*: One Voice Channel	
Telpak "C" . . . . .	.54
Telpak "D" . . . . .	.38

\* Fully Allocated

Superficially, the potential savings -- Series 2000 versus 5000 -- look promising: almost 60% along Hi-D routes; over 85% along Lo-D routes. Unfortunately for the user, it is very unlikely that savings of this magnitude could ever accrue. First of all, Telpak rates will probably go up as the "fill factor" increases; and secondly, some form of overhead will be required to manage and oversee the "shared facilities" arrangement.

**THE STRUCTURE OF TELPAK:** Telpak is not a facility: it is a simple bulk discount billing arrangement. The

common carrier charges for Telpak are calculated on a basis which yields around 9% return on their invested capital. While Telpak C allows use of up to 60 voice-grade channels, and Telpak D up to 240 voice-grade channels, from a practical standpoint, the customer rarely has a requirement to use the total capacity of the offering. Realizing that there would be a marked difference between capacity and actual use, AT&T priced Telpak on the basis of "average use" within the Telpak capacity (average use being referred to as the "fill factor"). While current, official fill factors are not immediately available, it is CCMI's estimate that it is in the 65% - 75% range for Telpak C and 85% - 90% for Telpak D: (i.e., on the average, a Telpak C customer is currently using only 39 to 45 of the available 60 channels; a Telpak D customer only 204 - 216 of the 240 available. From this we can project that for Telpak C, the carrier must receive at least \$.72/IXC Mile/Month (\$32.50/45) to achieve its allowable rate of return. For Telpak D the carrier must receive at least \$.43/IXC Mile/Month (\$92.05/216). In order to maintain this rate of return, we can extrapolate the minimum Telpak rate levels required as a function of the fill factor. For example, if we assume that unlimited Telpak sharing will eventually result in a 95% fill factor for Telpak C and 98% for Telpak D, then Telpak C IXC mileage charges must increase to about \$41.00/month (\$.72 x 57), and Telpak D to around \$101.00/month (\$.43 x 235).

For planning purpose, one should assume that the Telpak D rates represent the rock bottom price for individual voice-grade terrestrial channels. If this assumption holds true, the long-term anticipated rate differential between the present Hi-Lo private line rates and shared Telpak should approximate the following:

Per Channel			
Via Hi-Lo	Via Shared Telpak		% Savings
Hi-D Route \$ .92	C \$ .72 - .83		10% - 20%
	D .43 - .45		51% - 53%
Lo-D Route \$2.71	C .72 - .83		69% - 73%
	D .43 - .45		83% - 84%

The obvious conclusion from the preceding chart is that the most beneficial Telpak sharing may be for those applications along lo-density routes. It should also be immediately apparent that if one allocates 10% of the common carrier charges to shared Telpak administration, little, if any economic advantage occurs when sharing at the Telpak C level along hi-density routes.

**THE PROBABLE SCENARIO:** At present rates, savings in IXC charges of almost 30% can be achieved by upgrading from Telpak C to Telpak D. Consequently, the initial activity in Telpak sharing will be among the existing Telpak users. Consider the Telpak D customer using only 195 channels (out of 240 possible): he can

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# SHARING OF INTERNATIONAL FACILITIES UNLIKELY

(CONTINUED FROM PAGE 4)

accommodate an average Telpak C customer (40 channels), with considerable savings accruing to both parties. Following closely behind will be efforts by medium-size private line users of all categories to form a shared use facility (e.g., Telpak C) along Lo-D routes. Finally, new organizations specializing in "facilities management" will spring up in an effort to capitalize on the economic advantage of bulk facility offerings -- from Telpak to satellite transponder -- shared among numerous small-medium private line businesses.

For example, the per channel rate for 240 channels distributed among Western Union's Spacelink satellite serving cities is 55% of the individual channel rate. The per channel rate for a 60 channel requirement is 65% of the individual channel rate. Even assuming a 10% facility management fee, small group channel users (in the one-to-five channel range) could enjoy a significant savings with the bulk discount rate schedule.

**RESALE OF SERVICES:** In terms of new business opportunities, the FCC's order concerning resale of services is more far-reaching than unlimited sharing. Under the order, anyone (including the SCC's) wishing to lease private line services and resell elements of the facility at a profit, may do so. Such entities would still be fully subject to FCC regulation under the Communications Act of 1934 as amended; however, the FCC envisions a vastly streamlined approval cycle for organizations contemplating resale of common carrier services. The total impact of this order is difficult to forecast, although certain results appear inevitable:

- \* The Specialized Common Carriers will tend to lose their identities--looking more and more like Western Union--interstate carriers with no real pricing difference within the group. The SCC's will immediately expand their service offerings to every point served by Long Lines and additionally offer their subscribers "full facilities management" services.
- \* Nationwide Time-Sharing organizations may find this decision to be a real windfall--allowing them to expand their offerings to include message switching, data collection, and data dissemination services for "hire" using their in-place data networks.
- \* Information Base Services of all types potentially become more attractive since the supplier will now be able to supplement the information services income with income from message switching, and other heretofore sacrosanct territories of the communications common carriers.

**SHARING AND RESALE--THE INTERNATIONAL SCENE:** The FCC order applies equally to the International Record Carriers. Alas, the scope of our International Record

Carriers extends only to mid-point Pacific/Atlantic. The other half of the facility is controlled by a foreign Postal Telephone/Telegraph authority (PTT) which is typically operated as a government agency with rules and regulations established through international agreement (e.g., CCITT, CEPT). It is extremely unlikely that the foreign PTT's will agree to any form of shared use or resale of common carrier services. In fact, a planned upcoming "This Month" article covers a recent agreement among the European PTT's to phase out private line services in favor of individual use-sensitive pricing: i.e., the more messages (bits) a user transmits over a facility, the more he pays for use of the facility. Consequently, the FCC's unilateral directive has little practical meaning. There is one major exception to this statement: as long as the application involves the exclusive use of public exchange services (e.g., Telex, Cablegram, Datel, Telephone), the foreign administrations may permit "secretarial forwarding service" applications (e.g., numerous customer messages batched in the U.S., then transmitted to a foreign office on high speed Datel for relay to other European cities via public Telex). Prior to the FCC order, the International Record Carrier would probably not have allowed such an arrangement.

**IMPACT ON DDS:** The FCC's order appears to encompass DDS. The exact economic impact in terms of user service will depend to a large extent upon the outcome of the current DDS regulatory actions. (See separate story, Page 1.)

**WATS:** While the FCC order specifically excludes sharing and resale of WATS, it leaves the matter open for future action. It is CCMI's staff consensus that if WATS survives as a separate service offering, it too will eventually be opened to at least shared use. (Feature story, June, 1976 issue of "This Month.")

**SHARED FOREIGN EXCHANGE:** It is not clear which definition of "private line service" the FCC is using this week. From previous actions, however, private line services included all offerings tariffed under AT&T's tariff FCC #260 -- which includes foreign exchange: in this docket (#20097), private line is defined as "a service which provides for communications among pre-selected or specifically designated locations rather than general access to the switched public communications network." Consequently, it would appear that shared foreign exchange service is encompassed in the FCC order so long as the closed end of the FX terminates via a private line access facility (as opposed to the public network approach of MCI's doomed "Execunet" service).

**AT THE STATE LEVEL:** Most states offer Telpaks A, B, C, and D, and allow utilities, government agencies, and transportation carriers the privilege of sharing. Unlimited sharing, however, is not permitted and the likelihood that it will be is very small. Resale of services at the state level is almost an unthinkable possibility.

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## LONG LINES MAY WITHDRAW TELPAK

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Additionally, to those current users who justify Telpak on the basis of combining interstate and intrastate facilities, a word of caution: the local operating companies may find themselves in a position where they can no longer offer this "pooling of requirements" without bending to interstate regulation. If the choice boils down to the user's pocketbook and the jurisdictional domain of the state regulatory agency, one should have little doubt as to the outcome. For planning purposes, it would be wise to anticipate the possibility that combined interstate/intrastate Telpak has joined the whooping crane as an endangered species.

**ADDITIONAL FALLOUT:** It is possible that this FCC order will significantly effect AT&T's response to the May 19th FCC order suspending the proposed MPL rate structure (Feature story, June 1976 issue of "This Month"). Prognostications run the gamut from AT&T's complete withdrawal of Telpak to their meek acquiescence to the FCC's desire that AT&T become a carrier's carrier (i.e., a wholesaler, rather than a retailer). AT&T has previously stated when the matter of Telpak sharing was first introduced, that unlimited sharing would "be the end of Telpak."

## In Brief . . .

RCA Global has broadened its satellite network to include a thirty mile radius around six extension cities. Satellite transmission service had not been available from any of the other carriers to five of the new cities serviced by RCA. Boston, which is new to the RCA network, is also serviced by Western Union and Amsat. The other five cities to which RCA is now offering service are Phoenix; Mooers Forks, N.Y.; Norwalk, Conn; Princeton, N.J.; and Sunnyvale, N.J. Prior to April 10, RCA had only serviced seven terminal cities.

Southern Pacific Communications has abandoned its special full period point-to-point rate structure in favor of expanding its seventeen city coverage into a satellite transmission service. SPCC, who leases satellite channels from Western Union, has designed a rate scheme comparable to that of Western Union. Intercity channel charges for customers requiring less than sixty channels are identical to those of the existing satellite carriers. SPCC will extend the network via terrestrial lines to any point offered through its conventional private line service.

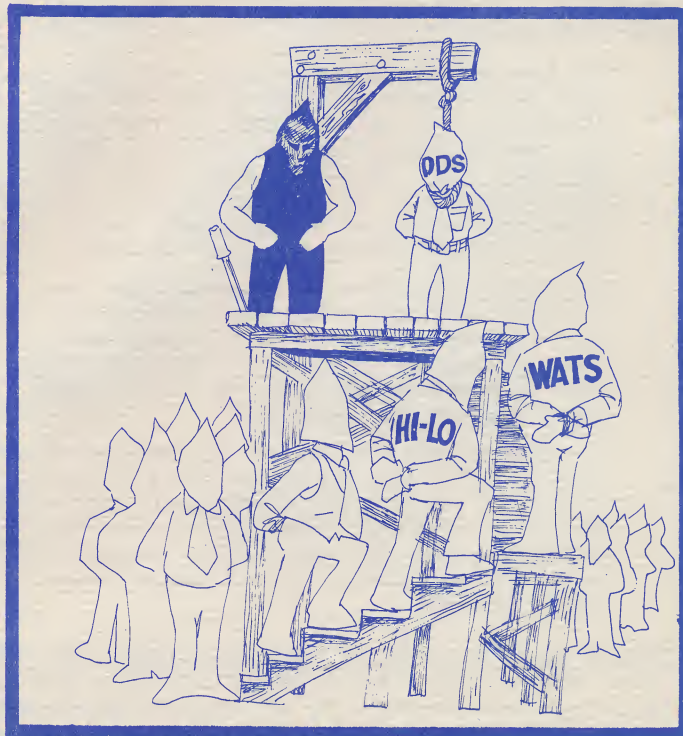
**OTHER EVENTS:** Telenet Communications has added three California cities to its list of Low Density service areas. The cities are Marina Del Rey, San Jose, and San Pedro. Furthermore, subscribers are now able to access Telenet via Wide Area Telecommunications Service. . . . United States Transmission Systems (USTS) has begun expanding its service coverage by filing to include Charlotte, N.C. and Greensboro, N.C. as terminal office cities. Columbia, Md.; Wayne, N.J.; and Woodbridge N.J. have been added as extension cities; and entrance sites of Appomattox, Va. and West Chester, Pa. have been proposed for interconnection into the USTS network.

The most probable course of events, however, is one which contemplates a series of proposed private line rate restructurings, which the FCC will find unacceptable. Such a course allows the maintenance of the status quo until hoped for favorable legislation (for AT&T) might be passed in Congress.

## FCC HOLDS FIRM ON EXECUNET

MCI has lost the latest battle in its year-long war with the FCC over Execunet. Execunet was ruled illegal on July 2, 1975 when it was decided that the offering did not conform to the FCC's definition of a private line service. The measured use service first ran into legal troubles when the FCC deemed that it was primarily a switched public message service similar to MTS. On June 30, 1976, the FCC reaffirmed its argument that Execunet could not be considered a private line service since it neither "originates nor terminates at a specific location designated by the customer via a communications channel dedicated to his private use and not used for public communication services." Execunet would have enabled a subscriber to reach distant terminals via dial access which would have transmitted the call on the MCI network and deposited it onto the public network at the foreign end, thus bypassing tolls without terminal restrictions at either end.

Expect MCI to file a tariff revision, in the very near future, similar to Execunet, but complying with the FCC definition of "private line". (The FCC's recent decision regarding resale and joint-use may make similar foreign exchange services a future possibility. See the feature story on Page 1.)





## SERIES 3000 RATE SET AS INTERIM DDS PRICE FLOOR

(CONTINUED FROM PAGE 1)

which the judges felt was disproportionately low in comparison to higher speed offerings. The judges termed this kind of pricing "predatory and anticompetitive," stating "AT&T admitted that there was 'little increase in cost with increase in speed,' yet the higher speed users must pay disproportionately higher charges for service than lower speed users..." Therefore, the judges concluded that the difference in the rates for the two speeds should not be as great as currently tariffed. In addition, the judges ruled that AT&T could not discriminate against customers on the basis of identity by refusing to offer DDS service to competitors and potential competitors (e.g., the Specialized Common Carriers).

**DDS RATES MAY INCREASE:** The decision appears to be designed to force AT&T Long Lines into two directions. First, the judges did not rule that the rates for the higher speed services (i.e., 56000bps) were too high, but that rates for lower speed services (2400bps) were too low. The clear implication of the order is that AT&T will have to raise the rates for lower speed services to bring them more in line with higher speed services. Secondly, since an earlier decision by the FCC blocks carriers from prohibiting the resale of DDS as well as other services (see separate story on Page 1), it is clear that the judges are intent on removing AT&T's restriction of the resale of DDS to competing carriers.

**FROM THE USER'S PERSPECTIVE:** The judges have ordered AT&T to file a new DDS tariff with those elements, which have been deemed discriminatory, removed. Furthermore, until a new tariff structure is approved, interim rates must be no lower than those of comparable private line data services currently being offered in AT&T's private line tariff (#260). These interim rates would remain in effect until a new DDS tariff (#267) is declared legal. Unless the Commission reverses the decision or it is successfully challenged, temporary 2.4kbps and 4.8kbps DDS rates will go up -- substantially, in some instances.

Chart #6 shows current low-speed DDS rates compared to Series 3000 private line rates. (There are no low

density DDS cities or short-haul interstate DDS channels.) DDS rates are compared to both the current Hi-Lo rates (in effect until 8/20/76) and the proposed MPL rate structure. In most examples, the rates for a sample channel between Chicago and New York would increase markedly if temporarity DDS rates were set no lower than Series 3000 private line rates, as the judges have ordered. The bulk of the increase is in the channel mileage charge; the percent change for shorter channels would not be as great. Here 2.4kbps rates would undergo an increase of at least 44% if designed to meet the MPL rates or 64% if designed to meet the Hi-Lo rates. If 4.8kbps rates were established along the lines of Hi-Lo the rates would increase 14%; but actually decrease .02% if designed to meet MPL rates.

**FORECAST:** The concern over the "discriminatory pricing" of DDS appears to center on AT&T's original "value of service" approach to the rate structure of the service. The Commission is insisting that the common carrier services be priced on the basis of the "cost to provide" each offering. Assuming that AT&T refiles DDS rates more in line with the Commission's wishes, we can forecast that (a) IXC mileage charges will remain at about their current tariffed level; (b) channel terminal rates will increase for 2.4kbps and 4.8kbps, and decrease for 56kbps service; and (c) Digital Access Line rates for all grades of service will be approximately equal at about the level now charged for 9.6kbps service. In this instance, intrastate DDS rates become more attractive for local pickup and distribution than the Long Lines rates. No doubt, for multiple-drop city applications, many clever system planners will find a way to "massage" the data at the local level before it is put onto the interstate facility.

On the surface, it might appear that Datran will be delighted with the fate of DDS. We doubt that this will be the case since Datran will also be forced to pay the higher Digital Access Line (DAL) charge when connecting its low-speed Dateline subscribers via the telco-provided DAL. Of course, higher rates mean a smaller market base and further slowing of the evolution of digital data applications and use.

TABLE #6

### 2-POINT CHANNEL BETWEEN NEW YORK AND CHICAGO

	DDS			
	2.4 kbps	4.8 kbps	HI-LO PLAN	MPL PLAN
INTERCITY MILEAGE (712)	\$291.92	\$441.44	\$655.04	\$529.92
(Per IXC Mile)	(\$.41)	(\$.62)	(\$.92)	(*)
CHANNEL TERMINAL (2)	20.60	41.20	75.80	49.20
STATION TERMINAL (2)	--	--	54.20	108.30
DATA ACCESS LINE (2)	133.90	175.00	--	--
DATA SERVICE UNIT (2)	30.90	30.90	--	--
TOTALS	\$477.32	\$688.64	\$785.04	\$687.42

\* First Mile, \$51.00; Next 14; \$1.80/mi; Next 10, \$1.50/mi; next 75, \$1.12/ea; next 900, \$.66/mi; each add'l mile, \$40.



# The Forum: A MATTER OF DEFINITION

A newly hired SCC salesman was overheard asking an old timer, "what is 'data communications'?" To which the old timer quipped, "Which word don't you understand, data or communications?"

We wish that definitions of industry-oriented terms were so simple. We would also hope for the day, in the not too distant future, when we can all agree upon the meaning of basic terms like "data processing," "private line," and "data communications." Without such agreement, common carrier tariffs, regulatory policies, and legislative actions will be subject to a continual barrage of conflicting interpretations.

Consider, for example, the FCC's March 1976 ruling (an action championed by IBM against AT&T) that AT&T's synchronous cluster-controller for DATASPEED\*40 terminals amounted to "data processing" rather than "data communications." Unfortunately for AT&T, its cluster-controller uses minicomputer technology to effect multiple-terminal control, transmission protocol, and line buffering. Had the cluster-controller been assembled with relays and fixed logic elements, the question of data processing would probably never have surfaced.

For the record, the definition of data processing established by the American National Standards Institute, Standards Committee X3 in 1970 is:

"data processing. The execution of a systematic sequence of operations performed upon data. Synonymous with information processing."

IBM's own definition of data communications ("Data Processing Glossary": June 1972) is. . .

"data communication. The transmission and reception of data, often including operations such as coding, decoding, and validation."

It is not difficult to distinguish between these two terms. (Which one don't you understand?) What is difficult for some to comprehend is that these functions frequently coexist in an interrelated manner which is impossible to separate. For example, data communication occurs within all data processing systems--between the main frame and the tape drive, between the disk drive and the disk controller, between the operator's console and core memory. The same holds true in the communications environment--data processing is a subset of technologies required to efficiently serve for message switching, routing of telephone calls, toll message accounting, code and speed conversion, to name but a few uses. The fact that IBM uses data communications as a vehicle to effect teleprocessing applications does not make it a communications common carrier: by the same token, the telephone company's use of computers and data processing to effect data communication applications does not make it a data processing organization. As a matter of definition, this coexistence was internationally recognized in September 1965 by the CCITT (Special Study Group A, Contribution #24). . .

"terminal installation for data transmission. Installation comprising: the data terminal equipment, the signal-conversion equipment, and any intermediate equipment. Note. -- In some instances, the data terminal equipment may be connected directly to a data-processing machine or may be part of it."

In the FCC proceeding regarding the DATASPEED\*40 cluster-controller, IBM successfully pursued the argument that because the cluster-controller used a computer and acted like a "data processor" to effect internal functions, then by logic it must be a "data processing system" rather than a data communication terminal controller as claimed by AT&T. In effect, IBM convinced the FCC that the organism was totally characterized by a single internal organ.

By analogy, an elephant has many organs, among which are heart, lungs, tail and trunk. Is an elephant then (a) an arterial pumping station, (b) a gaseous exchange bellows, (c) a tactually activated fly swatter, or (d) a self-priming, vacuum-lift, reciprocal shower pump?

In our opinion, the FCC's ruling against the DATASPEED\*40 cluster-controller as a "data processing" device is lacking in an understanding of fundamental definitions and flies in the face of the user's best interest. In this instance it is not the definitions of "data communications" and "data processing" which are in question -- rather, it is the difference in definition between two very basic terms. .

organ. "a different part or member having a specific function. . ."<sup>1</sup>

organism. "any complex thing or system having properties and functions determined not only by the properties and relations of its individual parts, but by the character of the whole which they compose and by the relations of the parts to the whole."<sup>2</sup>

It is interesting to note, that since the FCC's order against the cluster-controller, at least twenty state regulatory agencies have approved the use of the DATASPEED\*40 synchronous cluster-controller: Alabama, Arizona, California, Colorado, Connecticut, Delaware, District of Columbia, Indiana, Iowa, Kansas, Kentucky, Louisiana, Missouri, New Jersey, North Carolina, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas and Utah.<sup>3</sup> Unfortunately for the user, the FCC's action prohibits the use of this equipment for interstate application. As a matter of public interest, we urge the Federal Communications Commission to reconsider its position.

1,2 The Random House Dictionary of the English Language \* DATASPEED 40 is a registered trademark of AT&T

3 Tariffed in New York prior to the FCC order. Also tariffed in Texas where regulation is lacking.



CONSENSUS SURVEY -- "A Matter of Definition" -- July 1976

The regulatory and legislative processes typically center on the conflicting positions of vested-interest organizations. Unfortunately, on both fronts, members of the decision making bodies too frequently seek only the testimony of these special interest groups. Rarely does the user have the opportunity to present his view.

Results of this consensus survey will be summarized and distributed to all FCC commissioners, the Office of the President, and members of Congressional committees active in telecommunications legislation.

- 
- I. Which of the following statements most nearly reflects your opinion as to the role of the data processing functions within the data terminal service offerings of the communications common carriers?
- A. *If the data terminal is used for any type of "local" data processing, then it should be classified as a "data processing" terminal.*
  - B. *If the user's primary application of the data processing capabilities of the data terminal are limited to word processing (i.e., formatting, editing) the data transmission functions (i.e., buffering, line protocol), it should not be classified as a data processing system.*
  - C. *Data processing is a function unique enough to be classified as a total organism. It should not exist as a subsystem of any type within the common carrier-provided data terminal equipment.*
  - D. *There should be no restrictions placed upon the communications common carrier's authority to provide integrated data processing functions with their data terminal equipment offerings.*
  - E. *This is a complex question which needs further expert analysis to establish an applicable definition, standards and regulatory policy guidelines.*
  - F. *No Opinion.*
  - G. *My Opinion:* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

-----

CONSENSUS SURVEY BALLOT

"In my opinion, statement \_\_\_\_\_ most nearly defines the role of the data processing function within the common carrier-provided data communications terminal."

NAME: \_\_\_\_\_  
POSITION: \_\_\_\_\_  
COMPANY: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

CLASSIFICATION: (Check the one box in each category which most accurately classifies your organization.)

- I. Role in Communications    ☐ User    ☐ Supplier of Equipment to the Industry  
                                  ☐ Communications Common Carrier    ☐ Consultant  
                                  ☐ Educator    ☐ None of these.
- II. Size of Organization (Gross Sales)    ☐ under 1 million    ☐ 1-10 million  
  ☐ 10-100 million    ☐ over 100 million

COMPLETE BALLOT AND RETURN TO: The Center For Communications Management, Inc.  
(CCMI), P. O. Box 327, Ramsey, New Jersey 07446, ATTN: Editor, "THIS MONTH."



Nov 76



The Center For Communications Management is pleased to announce  
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Put our staff to work for you reviewing the thousands of pages of common carrier applications, new service/product announcements, and tariff changes released each month. Our staff will sort out the important facts, translate them into comprehensible English and relate them to the user.

"This Month" is a unique information service designed to provide the professional with a continuing analysis of important regulatory and common carrier events affecting his telecommunications budget, facilities management requirements, and system planning parameters. As an information service, "This Month" goes far beyond the cursory blurb--"according to Telephone Company sources," and discerns the practical implications affecting the business telecommunications sector. Recurring special monthly sections include "Service/Product of the Month," "At the State Level," and "Looking Ahead."

In addition to coverage of new and timely rate activity, "This Month" will cover a variety of reference and planning information. Scheduled for upcoming issues are research features on such topics as Basic Traffic Theory, Telex Relay from the United Kingdom, Practical Applications of AIOD, Emerging Telecommunications Market Opportunities, and Budget Planning for next year.

Important: Attached to the the enclosed sample issue of "This Month" is a Consensus Survey on the role of data processing in common carrier provided teleprocessing/communications terminal equipment. Your vote is urgently requested as this matter is scheduled for a final FCC vote in the next few months. A postage-paid return envelope is enclosed for your convenience.

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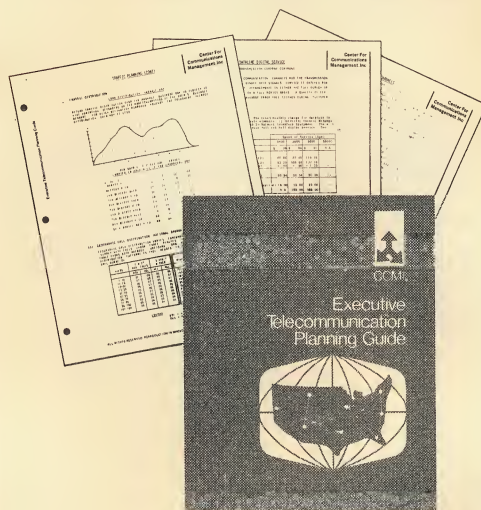
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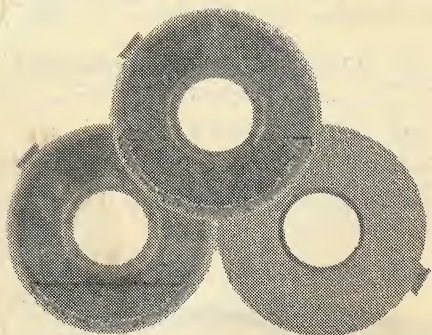
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